MOBstack Series - Cost-Effective Family of Passive Optical Networking to maximize dark fiber utilization
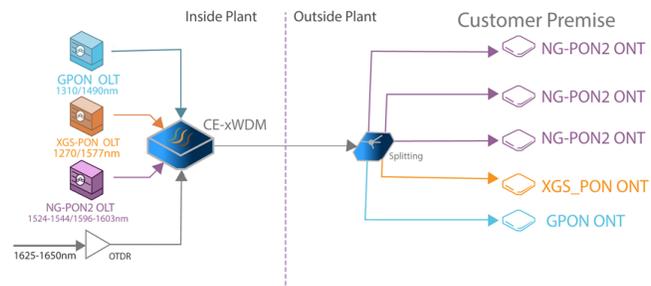
MOBSTACK SERIES

Upgrading your Passive Optical Network (PON) boosts data speeds and adds new services without overhauling existing infrastructure.

E.C.I. NETWORKS offers a variety of passive optical devices designed to transition your network to advanced PON technologies like XGS-PON or NG-PON2 efficiently. Our Coexistence (CEx) modules, placed near the Optical Line Terminal (OLT), allow current PON services to run alongside XGS-PON, NG-PON2, RF video, and OTDR functionalities. These modules support the GPON passband from 1290nm to 1500nm, preparing your network for future services like 25G and 50G. Additionally, the upgrade port facilitates the addition of new services without disrupting your existing setup, ensuring scalability and future readiness.

 In order to coexist with GPON networks, a Co-Existence WDM element (CE-WDM) is needed, replacing the legacy triplexer. Apart from the CE replacement, the ODN infrastructure remains unaffected. Although, current GPON (1310/1490 nm) and XGS-PON (1270/1577 nm) coexistence requires wavelength separation of signals assigned for different GPON ONTs, and XGS-PON ONTs, **MOBstack CE-WDM device**, low-cost WDM with Thin-film passive filters (TFF), can be used for that purpose.

Coexistence Element (CEx) Multiplexers for xWDM/xPON

The EN-CEx series by E.C.I. NETWORKS are sophisticated WDM devices designed to combine G-PON FTTH services with emerging XGS-PON and NG-PON2 technologies. The EN-CEx multiplexer integrates multiple services, including RF, PtP, and OTDR monitoring, ensuring superior performance and robust network reliability.

Compliance with ITU-T G.984.5 standards guarantees seamless integration with existing network infrastructures.

FEATURES

- CE-WDM solution for GPON, XGS-PON, NG-PON2, OTDR
- Allows gradual upgrade from GPON to 10 Gbps XGS-PON
- supports symmetric DS/US data rates of up to 10/10 Gbps
- GR-1209-CORE and GR-1221-CORE compliant
- Different Connectors available LC/UPC, LC/APC, SC/UPC, SC/APC, ST, etc
- Plug and play design
- fully passive, requires no power
- Low Insertion Loss: Minimized signal loss for enhanced performance.
- High Channel Isolation: Prevents cross-talk and signal interference.
- RoHS Compliant: Environmentally friendly and safe for use.
- Customizable Functionalities: Tailor-made configurations to meet specific deployment needs.
- Different form factors; ABS, LGX module or 1RU rackmount

Applications

- WDM Systems
- Passive Optical Networks (PON)
- FTTH Access Networks
- Optical Telecommunication Networks

Wavelength Specifications

Protocol/Service	Wavelength Range (nm)
G-PON Band	1290-1330, 1480-1500
XGS-PON Band	1260-1280, 1575-1580
NG-PON2 Band	1524-1544, 1596-1625
RF Video Band	1540-1565
PtP WDM-PON Band	1610-1625
OTDR Monitor Band	1640-1660

Technical Specifications

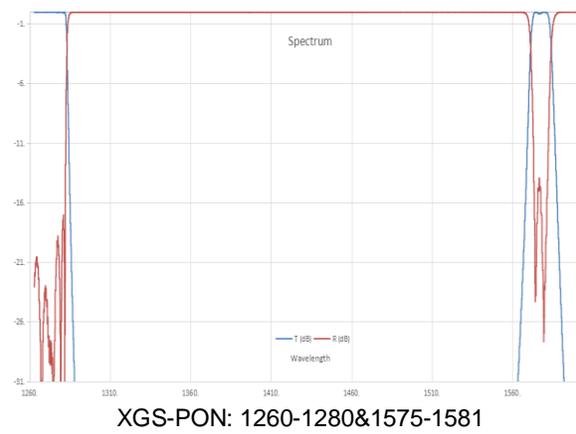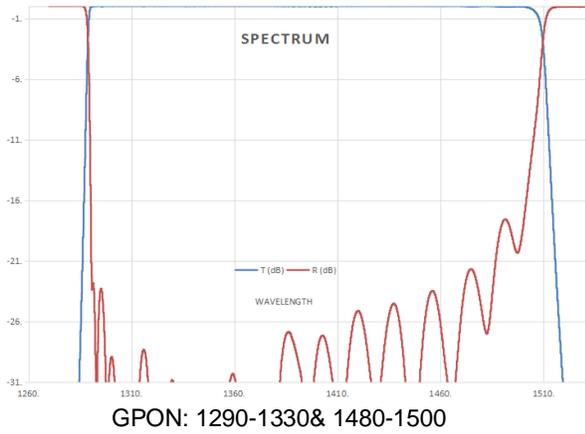| Specification	Value
Insertion Loss	Varies by model (0.8 dB to 2.3 dB)
Isolation	Varies by model (≥16 dB to ≥30 dB)
Polarization Dependent Loss (PDL)	≤0.2 dB
Directivity	≥50 dB
Return Loss	≥50 dB
Operating Temperature	-10°C to +70°C
Storage Temperature	-40°C to +85°C
Optical Power	300 mW
Fiber Type	Corning Ultra Fiber (G657.A1)

Model Specifications

Model	Protocols/Services	Max Insertion Loss	Isolation
EN-CEx01	GPON, XGS-PON	1.1 dB	≥30 dB
EN-CEx02	GPON, XGS-PON, NG-PON2	1.4 dB	≥16 dB

EN-CEx03	GPON, XGS-PON, NG-PON2, OTDR Monitor	1.7 dB	≥30 dB
EN-CEx04	GPON, XGS-PON, RF Video	1.4 dB	≥30 dB
EN-CEx05	GPON, XGS-PON, NG-PON2, OTDR Monitor, PtP WDM-PON, RF Video	2.3 dB	≥30 dB

OSA Spectrum for filters:

GPON: 1290-1330& 1480-1500

XGS-PON: 1260-1280&1575-1581

Ordering Information

The ordering code for EN-CEx series multiplexers is structured as follows:

EN-CEx0X-SX-AX-XX

Where:

- **0X**: Model Number
- **SX**: Configuration
- **AX**: Package Type
- **XX**: Connector Type

Ordering Code	Description
EN-CEx01	**(GPON, XGS-PON)**
EN-CEx01-1x1-LGX-LCU	Model: EN-CEx01, Single unit, LGX, LC/UPC connector
EN-CEx01-1x1-LGX-LCA	Model: EN-CEx01, Single unit, LGX, LC/APC connector
EN-CEx01-1x1-LGX-SCU	Model: EN-CEx01, Single unit, LGX, SC/UPC connector
EN-CEx01-1x1-LGX-SCA	Model: EN-CEx01, Single unit, LGX, SC/APC connector
EN-CEx01-2x2-LGX-LCU	Model: EN-CEx01, Dual units, LGX, LC/UPC connector
EN-CEx01-2x2-LGX-LCA	Model: EN-CEx01, Dual units, LGX, LC/APC connector
EN-CEx01-2x2-LGX-SCU	Model: EN-CEx01, Dual units, LGX, SC/UPC connector
EN-CEx01-2x2-LGX-SCA	Model: EN-CEx01, Dual units, LGX, SC/APC connector
EN-CEx01-16x16-1RU-LCU	Model: EN-CEx01, Configuration: 16x16 (16x CEx WDM Built-in), 1RU Rack, LC/UPC connector
EN-CEx01-16x16-1RU-LCA	Model: EN-CEx01, Configuration: 16x16 (16x CEx WDM Built-in), 1RU Rack, LC/APC connector
EN-CEx01-16x16-1RU-SCU	Model: EN-CEx01, Configuration: 16x16 (16x CEx WDM Built-in), 1RU Rack, SC/UPC connector
EN-CEx01-16x16-1RU-SCA	Model: EN-CEx01, Configuration: 16x16 (16x CEx WDM Built-in), 1RU Rack, SC/APC connector
EN-CEx02	**(GPON, XGS-PON, NG-PON2)**
EN-CEx02-1x1-LGX-LCU	Model: EN-CEx02, Single unit, LGX, LC/UPC connector
EN-CEx02-1x1-LGX-LCA	Model: EN-CEx02, Single unit, LGX, LC/APC connector
EN-CEx02-1x1-LGX-SCU	Model: EN-CEx02, Single unit, LGX, SC/UPC connector
EN-CEx02-1x1-LGX-SCA	Model: EN-CEx02, Single unit, LGX, SC/APC connector
EN-CEx02-2x2-LGX-LCU	Model: EN-CEx02, Dual units, LGX, LC/UPC connector
EN-CEx02-2x2-LGX-LCA	Model: EN-CEx02, Dual units, LGX, LC/APC connector
EN-CEx02-2x2-LGX-SCU	Model: EN-CEx02, Dual units, LGX, SC/UPC connector
EN-CEx02-2x2-LGX-SCA	Model: EN-CEx02, Dual units, LGX, SC/APC connector
EN-CEx02-16x16-1RU-LCU	Model: EN-CEx02, Configuration: 16x16 (16x CEx WDM Built-in), 1RU Rack, LC/UPC connector

EN-CEx02-16x16-1RU-LCA	Model: EN-CEx02, Configuration: 16x16 (16x CEx WDM Built-in), 1RU Rack, LC/APC connector
EN-CEx02-16x16-1RU-SCU	Model: EN-CEx02, Configuration: 16x16 (16x CEx WDM Built-in), 1RU Rack, SC/UPC connector
EN-CEx02-16x16-1RU-SCA	Model: EN-CEx02, Configuration: 16x16 (16x CEx WDM Built-in), 1RU Rack, SC/APC connector
EN-CEx03	**(GPON, XGS-PON, NG-PON2, OTDR Monitor)**
EN-CEx03-1x1-LGX-LCU	Model: EN-CEx03, Single unit, LGX, LC/UPC connector
EN-CEx03-1x1-LGX-LCA	Model: EN-CEx03, Single unit, LGX, LC/APC connector
EN-CEx03-1x1-LGX-SCU	Model: EN-CEx03, Single unit, LGX, SC/UPC connector
EN-CEx03-1x1-LGX-SCA	Model: EN-CEx03, Single unit, LGX, SC/APC connector
EN-CEx03-2x2-LGX-LCU	Model: EN-CEx03, Dual units, LGX, LC/UPC connector
EN-CEx03-2x2-LGX-LCA	Model: EN-CEx03, Dual units, LGX, LC/APC connector
EN-CEx03-2x2-LGX-SCU	Model: EN-CEx03, Dual units, LGX, SC/UPC connector
EN-CEx03-2x2-LGX-SCA	Model: EN-CEx03, Dual units, LGX, SC/APC connector
EN-CEx04	**(GPON, XGS-PON, RF Video)**
EN-CEx04-1x1-LGX-LCU	Model: EN-CEx04, Single unit, LGX, LC/UPC connector
EN-CEx04-1x1-LGX-LCA	Model: EN-CEx04, Single unit, LGX, LC/APC connector
EN-CEx04-1x1-LGX-SCU	Model: EN-CEx04, Single unit, LGX, SC/UPC connector
EN-CEx04-1x1-LGX-SCA	Model: EN-CEx04, Single unit, LGX, SC/APC connector
EN-CEx04-2x2-LGX-LCU	Model: EN-CEx04, Dual units, LGX, LC/UPC connector
EN-CEx04-2x2-LGX-LCA	Model: EN-CEx04, Dual units, LGX, LC/APC connector
EN-CEx04-2x2-LGX-SCU	Model: EN-CEx04, Dual units, LGX, SC/UPC connector
EN-CEx04-2x2-LGX-SCA	Model: EN-CEx04, Dual units, LGX, SC/APC connector
EN-CEx05	**(GPON, XGS-PON, NG-PON2, OTDR Monitor, PtP WDM-PON, RF Video)**
EN-CEx05-1x1-LGX-LCU	Model: EN-CEx05, Single unit, LGX, LC/UPC connector
EN-CEx05-1x1-LGX-LCA	Model: EN-CEx05, Single unit, LGX, LC/APC connector
EN-CEx05-1x1-LGX-SCU	Model: EN-CEx05, Single unit, LGX, SC/UPC connector
EN-CEx05-1x1-LGX-SCA	Model: EN-CEx05, Single unit, LGX, SC/APC connector
EN-CEx05-2x2-LGX-LCU	Model: EN-CEx05, Dual units, LGX, LC/UPC connector
EN-CEx05-2x2-LGX-LCA	Model: EN-CEx05, Dual units, LGX, LC/APC connector
EN-CEx05-2x2-LGX-SCU	Model: EN-CEx05, Dual units, LGX, SC/UPC connector
EN-CEx05-2x2-LGX-SCA	Model: EN-CEx05, Dual units, LGX, SC/APC connector

NOTICE:

E.C.I. Networks reserves the right to make changes to or discontinue any optical link product or service identified in this publication, without notice, to improve design and/or performance. Applications that are described herein for any of the optical link products are for illustrative purposes only.

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